

DLC coating.

You sometimes read that a watch is 'DLC coated', but the questions are:

- What does it mean?
- How is it applied?
- And why would you want this (or not?).

Time for some education!

What does it mean.

DLC simply stands for 'Diamond-like Carbon', judging by the name it will be no surprise that it is a hard black coating. Diamond-like carbon (DLC) is a class of amorphous carbon material that displays some of the typical properties of diamond. DLC is usually applied as coatings to other materials that could benefit from some of those properties. The reasons for applying it, not in order of importance, are usually: hardness, wear resistance, and slickness. And for watches: it's usually all about aesthetics!

How is it applied.

There are several types of DLC coatings, produced with different technologies, such as PVD and PACVD. Most commonly used for watches: the PVD technology and since this is all about watches we will skip the other technologies to apply it.

PVD stands for 'Physical Vapor Deposition', it's a plasma coating deposition technology that uses a physical process (heating or sputtering) to produce a vapor of material, which is then deposited on the object (a watch in this case) which requires coating.

Why would you want this (or not?).

Applications of DLC typically utilize the ability of the material to reduce abrasive wear, however the black color of the DLC coating makes it popular as a decorative coating.

And that brings us to watches, DLC is a popular decorative coating on fine watches. When used on a watch, DLC coatings provide superior durability and wear resistance. The coatings, which are matt (or shiny) black, also create aesthetic appeal. These characteristics, along with the beauty of DLC, have helped it to grow in popularity as a hard surface coating for high-end watches.

Of course there are advantages for a DLC coating as pointed out earlier but the simple answer is: it's a matter of taste, you like the looks . . . or you don't!

Some facts & nice to know:

- The coating is harder than the material of the watch itself, the base material of a TWCO for example is 316L surgical stainless steel.
- DLC is the coating itself, PVD is just the name of a technology to apply it.
- Typical thickness of a DLC layer on watches: an average 2 microns (0,002 mm)
- The coating itself, although more 'scratch-resistant' than non-coated stainless steel watches, is not impervious to scratches! It can scratch and it can wear!
- The DLC gives a watch that sturdy tactical 'stealth' look!
- Last but not least: a DLC coating says nothing of the quality of the watch itself!

So now you know all about it!

This info is presented to you by: **TWCO**[®] Technical Watches.